BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA



Order Instituting Rulemaking to Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions. Rulemaking R.18-12-005 (Filed December 13, 2018)

MUSSEY GRADE ROAD ALLIANCE PHASE 2 RESPONSES TO COMMENTS AND PROPOSALS FILED ON SEPTEMBER, 17, 2019

Diane Conklin, Spokesperson Mussey Grade Road Alliance P.O. Box 683 Ramona, CA 92065 Telephone: (760) 787-0794

Telephone: (760) 787-0794 Email: dj0conklin@earthlink.net

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1. INTRODUCTION

On December 19, 2019, the Commission opened an Order Instituting Rulemaking (OIR) to Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions.¹ The Mussey Grade Road Alliance (Alliance or MGRA) filed Comments on the Rulemaking on February 8, 2019 in accordance with instructions in the OIR,² thus fulfilling requirements for obtaining party status as per the OIR³ and Rule 1.4(a)(2) of the CPUC Rules of Practice and Procedure. MGRA hereby complies with instructions in ALJ Semcer's March 12 Party Status Ruling,⁴ parties that must specify method and date by which they obtained party status.

MGRA contributed to the Phase 1 proceeding, filing its Phase 1 Comments on March 25, 2019,⁵ its Phase 1 Replies on April 2, 2019,⁶ Comments on the Phase 1 PD on May 16, 2019,⁷ and Replies on the Phase 1 PD on May 21, 2019.⁸ MGRA's proposals regarding de-energization were filed on September 16, 2019.⁹ On September 26, 2019, ALJ Semcer issued an email ruling¹⁰ changing the comments process and due date from that defined in the Scoping Memo, ¹¹ and directing parties to direct their comments to the proposals and comments filed on September 17, 2019, setting a due date of October 10th.

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¹ R.18-12-005; ORDER INSTITUTING RULEMAKING; December 19, 2018. (OIR).

² R.18-12-005; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON THE DE-ENERGIZATION ORDER INSTITUTING RULEMAKING (OIR); February 8, 2019. (MGRA OIR Comments) ³ OIR; p. 15.

⁴ R.18-12-005; Email Ruling Adopting Protocol for Noting Party Status in Filings; March 12, 2019. (Party Status Ruling)

⁵ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE PHASE 1 DE-ENERGIZATION COMMENTS; March 25, 2019. (MGRA Phase 1 Comments)

⁶ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE PHASE 1 DE-ENERGIZATION REPLY COMMENTS; April 2, 2019. (MGRA Phase 1 Reply)

⁷ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON PROPOSED DECISION ADOPTING DE-ENERGIZATION GUIDELINES; May 16, 2019. (MGRA Phase 1 PD Comments)

⁸ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE REPLY COMMENTS ON PROPOSED DECISION ADOPTING DE-ENERGIZATION GUIDELINES; May 21, 2019. (MGRA Phase 1 PD Reply)

⁹ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE PHASE 2 TRACK 1 DE-ENERGIZATION PROPOSALS; September 16, 2019. (MGRA Track 1 Proposals)

¹⁰ R.18-12-005 Email Ruling Changing Comments Process and Due Date for Phase 2 Track 1; September 26, 2019.

¹¹ R.18-12-005; ASSIGNED COMMISSIONER'S PHASE 2 SCOPING MEMO AND RULING; August 14, 2019; p. 11. (Phase 2 Scoping Memo)

However, during the week of October 7th, 2019, power shutoff alerts were issued by major utilities due to a moderate strength off-shore wind event. This resulted in PSPS being initiated by PG&E on October 9th, threatening power shutoff for hundreds of thousands of customers.¹² In all, approximately 2 million Californians lost power due to the PG&E de-energization event.¹³ In response to the PSPS warning, ALJ Semcer issued a ruling on October 8, 2019 postponing the comment due date until October 15, 2019.¹⁴ MGRA files these comments pursuant to ALJ Semcer's October 8th email ruling.

2. TRACK 1 ISSUES

The Phase 2 Scoping Memo lays out six topics to be addressed within Track 1. We use the numbering scheme specified in the Scoping Memo to number topics and subtopics, albeit with a 2.* in the section header. Hence, Item 2 of the Scoping Memo would be in Section 2.2 below. MGRA does not have proposals for all items specified in the Scoping Memo but reserves the right to reply to comments of other parties.

2.1. Definitions/Standard Nomenclature

MGRA has no comments at this time.

2.2. Access and Functional Needs (AFN) Populations

MGRA has no comments at this time.

2.3. PSPS Strategy and Decision-Making

2.3.1. a. Last Resort Criteria

¹² Los Angeles Times; "Massive power outage in California sparks anger toward PG&E"; Joseph Serna, Taryn Luna, Jaclyn Cosgrove, Patrick McGreevy; October 9, 2019 (LA Times) https://www.latimes.com/california/story/2019-10-09/massive-california-power-outage-sparks-anger-at-pge

¹³ Bloomberg; "California Governor Attacks PG&E for Blackout Caused by 'Greed and Neglect"; David R. Baker, Mark Chediak; https://finance.yahoo.com/news/governor-attacks-pg-e-blackout-024355466.html (Bloomberg)

¹⁴ R.18-12-005 Email Ruling Changing Due Date for Phase 2 Track 1 Comments to October 15, 2019; October 8, 2019.

"What criteria should the Commission evaluate when assessing whether PSPS is being used as a measure of last resort?"

MGRA

The Alliance submitted proposals in response to this question, and we refer the Commission to our filing.¹⁵ In summary, our proposals are:

- That risk/benefit and cost/benefit considerations should be the primary determinant of whether a proactive power shut-off can be considered "reasonable".
- That in order to make a determination of risk, cost and benefit a number of considerations would need to be quantified, including risks to residents from loss of communications (including fire risks), risk that residents without power may resort to measures that ignite wildfires, increased risk during evacuation when no power is available, and dangers to vulnerable residents. This quantification should be included as a Track 2 deliverable.
- That SED should include in its determination of whether a PSPS event was conducted in accordance with Commission "last resort" requirements:
 - Forecasted wind speeds approaching or exceeding the design requirements used in the design, construction, and maintenance of the de-energized circuit(s).
 - Measured wind speeds approaching or exceeding the design requirements used in the design, construction, and maintenance of the de-energized circuit(s).
 - Reported damage to or vegetation contact with utility infrastructure.
 - History of damage to or vegetation contact with equivalent circuits under equivalent conditions.
 - o Small population exposed to wildland-urban interface affected.
 - o Special risks associated with the particular circuit that was de-energized.

¹⁵ MGRA Track 1 Proposals; pp. 2-5.

• If circuits are not designed, built, maintained, or operated for known local conditions¹⁶ and as a result require PSPS as a supplemental safety measure, a remediation plan needs to be put into place within the scope of Track 2 so that deenergization thresholds can be raised.

Utilities and Public Advocates

SCE and PG&E maintain the position that fairly generic and non-intrusive requirements such as WMP compliance, vegetation management, patrols and changing recloser settings are sufficient to ensure that they have exhausted all alternatives to de-energization. A similar position is also echoed by California Public Advocates. MGRA does not believe that these measures are sufficient to ensure that utilities do not exercise their option to de-energize lines solely to avoid liability, and urge the measures listed above be adopted. CalPA partially agrees with MGRA's point and suggests that "utilities should evaluate if de-energization of affected circuits could have been prevented by proactive system hardening and vegetation management activities" and that "the utilities should present an analysis of whether they could have reduced the size of the affected area and/or the duration of the de-energization event while still protecting public safety." MGRA concurs, but we believe that a cost/benefit or risk/benefit analysis would be more rigorous and provide a greater public safety benefit.

SCE

SCE makes a proposal similar to one of MGRA's, specifically that the Commission consider "what the forecasted and observed weather conditions were in the area of the de-energization to evaluate whether the deenergization was used as a last resort."²⁰ This information would help the

¹⁶ GO 95; Rule 13 and 31.1.

¹⁷ R.18-12-005; SOUTHERN CALIFORNIA EDISON COMPANY'S (U338-E) COMMENTS ON PHASE 2 TRACK 1 ISSUES; September 17, 2019; p. 5. (SCE Proposal)

R.18-12-005; PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) OPENING COMMENTS ON ASSIGNED COMMISSIONER PICKER'S PHASE 2 SCOPING MEMO AND RULING; September 17, 2019; p. 7.

¹⁸ R.18-12-005; TRACK 1 PROPOSAL OF THE PUBLIC ADVOCATES OFFICE ON THE ASSIGNED COMMISSIONER'S PHASE 2 SCOPING MEMO AND RULING; September 17, 2019; pp. 1, 3, 4. (CalPA Proposal)

¹⁹ Id.

²⁰ SCE Proposal; p. 5.

Commission and parties gauge whether reasonable thresholds are being set, and that utilities are using accurate weather modeling in their decision making process.

In order to demonstrate what MGRA/SCE's proposal would look like, MGRA served a data request on SCE to obtain predicted and measured wind speeds and FPI for some of the five shut-off warnings that it issued this past summer. SCE was not able to fully comply in time to provide all data prior to the Track 1 filings, but these will be available by the time Track 2 is initiated²¹ and we would urge the Commission to keep the question of "last resort" open through Track 2. SCE was able to provide a partial response, however, which MGRA attaches to its filing. The response from SCE shows predictions of maximum wind speeds for circuits of concern for the June 18 to June 22 and July 19 to July 21 shut-off warnings.²²

The data provided by SCE consists of a table containing circuit name, the time/date at which the prediction commences, the time/date at which the prediction ends, the peak wind forecast, the peak gust forecast, and SCE's FPI calculation. An example can be seen in the table below:

6/20/19 Monitored Circuit List					
Circuit	Date/Time Starting	Date/Time Ending	Peak Wind Forecast	Peak Gust Forecast	Peak FPI
SKY HI	6/20/19 12:00	6/21/19 18:00	35	50.32	12.02
SUN VILLAGE	6/20/19 12:00	6/20/19 21:00	30.7	44.36	12.05
TITAN	6/20/19 12:00	6/21/19 15:00	32.1	46.63	12.05
CAMPROCK	6/20/19 15:00	6/21/19 3:00	33.69	47.93	12.02
TUSSING	6/20/19 21:00	6/21/19 15:00	36.42	52.96	11.9

Table 1 - SCE Monitored Circuit list, June 20, 2019

The maximum predicted wind gust value from this period was 52.96 mph on June 20, 2019, for the Tussing circuit. Minimum wind gust speeds meriting entry into the monitored circuit list were as low as 38.49 mph on the Fingal circuit for the period starting July 14, 2019. We note that IOUs currently interpret the GO 95 wind loading criteria as requiring wood poles to withstand 56 mph wind gust speeds, though SED's interpretation of the GO 95 rule is for 92 mph.²³ D.12-04-024 states that: "As a general principle, SDG&E should keep power flowing when wind speeds exceed

²³ D.12-04-024; pp. 5-6.

²¹ MGRA / SCE meet and confer phone call, October 7, 2019, and follow-up confirmation emails.

 $^{^{22}}$ R.18-12-005; DATA REQUEST SET MGRA - SCE - Verbal – 001; Attached to filing. Note that days in which no circuits were flagged as exceeding SCE criteria were not included in the attachment.

56 mph. Without power, numerous unsafe conditions can occur. Traffic signals do not work, medical life support equipment does not work, water pumps do not work, and communication systems do not work. As the California Legislature recognized in § 330(g), '[r]eliable electric service is of utmost importance to the safety, health, and welfare of the state's citizenry and economy.' Consequently, SDG&E should shut off power only as a last resort, and only when SDG&E is convinced there is a significant risk that strong Santa Ana winds will topple power lines onto flammable vegetation. This is consistent with SDG&E's Commission-approved tariffs, which acknowledge that SDG&E has an obligation to provide electrical service on a continuous basis."²⁴

It is clear that SCE is notifying customers of impending shutoff at significantly lower thresholds than would be appropriate if it were considering only the risk of engineering-related failures. Notification and shut-off criteria below 56 mph should therefore be viewed only from the vantage point of vegetation and external object contact. This will require additional scrutiny in Track 2, and should be an issue of interest in post-event PSPS reports issued to SED.

CforAT

The Center for Accessible Technologies lists many risks to which Access and Functional Needs (AFN) populations are exposed by loss of power and which should be taken into account when determining whether PSPS is being used as a measure of last resort,²⁵ as well as general risks to the broader population,²⁶ including some that MGRA has raised in previous proceedings and filings. They conclude that to "meaningfully consider whether de-energization is being used 'as a last resort,' a utility would have to make meaningful calculations regarding the increased risks to public safety, including but not limited to the risks identified above, and evaluate whether the benefit to public safety from shutting off power outweighs the collective harm." MGRA fully agrees with CforAT's point, but we do not believe that the Commission's current approach to de-energization allows it to be adequately achieved.

²⁴ pp. 29-30.

²⁵ R.18-12-005; CENTER FOR ACCESSIBLE TECHNOLOGY'S PHASE 2 TRACK 1 PROPOSAL; September 17, 2019; pp. 13-14. (CforAT Proposal)

²⁶ Id.; pp. 15-16.

²⁷ Id.; p. 16.

The Alliance has argued for using cost/benefit and risk/benefit analyses to determine the proper threshold for de-energization since we first became involved in A.08-12-005. There are many potential risks, as CforAT demonstrates, that need to go into the "meaningful calculations" that CforAT correctly asserts factor into a determination of whether de-energization is a measure of 'last resort'. Calculating these risks effectively is complex, as is correctly incorporating the risk of ignition and catastrophic wildfire. Correctly performing these calculations cannot be done while a fire weather emergency is looming, nor can it be done properly in the ten day period that a utility has to prepare its shut-off report.

Meaningful calculations that balance risk are complex and need to be performed prior to potential PSPS and used to create standardized risk criteria used for shutoff threshold determinations.

Joint Local Governments / California Conference of Local Health Officers (CCLHO)

The Joint Local Governments provide a submission from the California Conference of Local Health Officers. ²⁸ Local health officers echo the concerns of CforAT and other intervenors, and provide valuable epidemiological studies from Hurricane Irma, Hurricane Katrina, Superstorm Sandy, and Hurricane Maria that could be used to quantify impacts of power outages on vulnerable populations. "The potential benefit from a power shutoff needs to be balanced with the potential harm to the population.", they state, and point out that the 2003 Northeast power outage led to 90 excess deaths in New York City. ²⁹

This is exactly the kind of quantification that the Commission should see applied to the question of PSPS thresholds. We all take electrical power for granted, and generally don't envision the full spectrum of risks that arise when it disappears. Some of these risks affect vulnerable individuals, but some will be more generally spread across the society. For example, Commission staff (along with MGRA and other intervenors) did some examination of generator fires in A.08-12-005, and the Decision concluded that "if a power shut-off event occurs, then every affected customer with a portable generator would have a need to use it. The number of people using generators during a shut-off event may be significant, as SDG&E stated that 'a large number of people in the backcountry have portable generators.' The upshot is that the risk of fires from other

R.18-12-005; JOINT LOCAL GOVERNMENTS' PHASE 2, TRACK 1 PROPOSALS; September 17, 2019; Attachment F, CCLHO Letter to CPUC re: De-energization. (Joint Local Governments Proposals).
 Id.; Note that the PG&E shut-off during the week of October 7th may provide additional epidemiological data once all impacts are evaluated.

sources would be multiplied manyfold during a power shut-off event..."³⁰ This is not an academic or speculative concern: during a recent PG&E power outage three generator fires were reported in Nevada County alone.³¹ Had any of these fires escaped into the surrounding wildlands they may have become serious wildfires under PSPS weather conditions.

The Elephant in the Room

While it is a late-breaking development, it is impossible to discuss the question of whether utility shut off is a last resort measure without looking at the events of the week of October 7th. As per the LA Times October 9th article cited previously, questions are already being raised about the timing and geographical specificity of PG&E's shutoff plan. State Senator Jerry Hill states questions the extent of the PG&E shutoff: "I think it is excessive... PG&E clearly hasn't made its system safe. These shutdowns are supposed to be surgical. But shutting down power to 800,000 people in 31 counties is by no means surgical." On October 14, 2019 a letter from Governor Gavin Newsom was sent to CPUC President Batjer, calling for an investigation into the PG&E PSPS event, calling the scope and duration of the outage "unacceptable", and stating that: "concrete and expedited steps to both limit and focus the use of PSPS as a wildfire prevention tool in the future..." On the same day, President Batjer sent a letter to PG&E also calling the scope of and response to the outage "unacceptable", and calling for PG&E to "enhance efforts to minimize the size of future events". The prevention of the same day are calling for PG&E to "enhance efforts to minimize the size of future events".

In the end, PG&E cut power to an estimated two million people for an extended period of time,³⁵ with massive economic and safety impacts. The severity of the offshore wind event that triggered the shutoff was not extreme, but rather typical of autumn California weather, raising the

³⁰ D.09-09-030; p. 45.

³¹ "Nevada County crews battle generator fires during planned outages"; Max Resnik; KCRA; September 26, 2019. https://www.kcra.com/article/nevada-county-generator-fires-pg-e-outages-california/29256051; Link provided to MGRA by UCAN.

³² LA Times

³³ Letter from Gavin Newsom to President Batjer, October 14, 2019: https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/News_Room/NewsUpdates/2019/SCAP251 9101413020.pdf

³⁴ Letter from CPUC President Batjer to PG&E; https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/News_Room/NewsUpdates/2019/PGE%20L etter%20-%20PSPS%2010-14-19.pdf

³⁵ Bloomberg.

specter that this scenario will play out over and over again if utilities are allowed to have a free hand in determining their shutoff thresholds.

As we've stated in many filings, there are substantial safety risks that are being imposed on the public either both at the individual level (impacts on health and safety of customers in need) and at the societal level (risk of unreported fires, consequential fire ignitions, and impacts to communication and evacuation). For a utility-ignited wildfire, the cause of harm is relatively clear-cut. For harms due to PSPS, however, some of these harms are hard to definitively attribute to the PSPS itself, which may only be a contributing cause. In such cases the utility may be able to shed some or all of its liability for customer harm because it would be hard to prove that the utility was the cause of the harm. If, for example, someone was to be injured in a wildfire because they did not receive a timely warning due to disruptions in the communications network, would it be the fault of the utility? Or of the communication provider whose network was not resilient? Or of the persons causing the fire? Every single harm related to shutoff will have a different fact pattern, and each one would need to be individually litigated. From the utility's standpoint, this muddling of responsibility provides some buffering from liability, since many of those trying to prove harm would have a substantial burden of proof. This is an attractive, though perverse, incentive and we may be seeing it in play the week of October 7th.

What played out over the week of October 7th was the scenario that the Alliance had warned of since 2007. We urge the Commission to accept our proposals for making "last resort" determinations based on additional data available to all utilities, and to commence with the mechanisms to develop cost/benefit and risk/benefit determinations that will help clearly identify reasonable PSPS thresholds.

2.3.2. Standardized PSPS Criteria

"Would adopting standardized wildfire risk criteria (e.g. wind speeds, weather conditions, vegetation dryness conditions, etc.) across utilities promote the public safety, and if so, what criteria should be adopted?"

MGRA

In its proposal filing, MGRA takes the position that standardized wildfire risk criteria for power shutoff are required in order to ensure that all California residents have equal access to electricity and equal protection from power line fires, and that these criteria should be based upon scientific evidence and utility experience.³⁶ Identification of potential criteria could be within the scope of Track 1, but development of detailed criteria would require technical analysis and be better scoped within Track 2. MGRA also has suggested that artificial intelligence (AI) and machine learning algorithms used on utility data could inform shutoff decisions. In the September 18th workshop for R.18-10-005, external consultants such as former Department of Energy Chief Risk Officer John McWilliams also recommended data mining to inform safety strategies and decisions.

Utilities

All of the utilities oppose standardized PSPS criteria.

PG&E

Among the considerations that PG&E factors into its de-energization decisions is a "Probability of Outage Producing Winds" (OPW) model,³⁷ which is unique to PG&E. MGRA sought to obtain details of this model, which PG&E explained was proprietary and required NDA. Since public discussion of PG&E PSPS decision inputs within the forum of this proceeding is desirable MGRA is seeking further information from PG&E that can be brought into the procedural record. PG&E answers to MGRA data requests are included in Attachment 2 of this filing.

According to PG&E, the "OPW converts forecasted wind speeds into an outage percentage based on the historical frequency of hours that unplanned outage activity was observed at those wind speeds. The model input is the sustained wind speed from a gridded, high-resolution model. The output is the OPW frequency on the same grid resolution. The OPW model is used in concert with other modeling techniques, such as analog forecasting, to estimate the potential for outage

³⁶ MGRA Track 1 Proposals; pp. 5-7.

³⁷ PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC; Event from: 06/07/2019 to 06/09/2019; p. 2.

activity to occur."³⁸ Their model is built on historical PG&E outage data in combination with PG&E's WRF-based climatology model, which was developed in conjunction with its external vendors.³⁹

While MGRA supports the use of outage data for metrics and predictive purposes,⁴⁰ the fact that PG&E is using this data in a proprietary way does not allow its reasonableness to be judged, and does not encourage the establishment of utility best practices with regard to the use of outage data. For that reason, the Commission should require that models used to make shutoff determinations be publicly disclosed. This is particularly important in light of the October PSPS events in which PG&E determined to shut off power to over 600,000 customer residences. The Commission and the public need to fully understand how exactly PG&E made its shutoff determination, and its OPW outage model was an input into this decision.

Abrams

Will Abrams is concerned that without "set thresholds for de-energization, utilities will utilize these PSPS events to minimize their financial risks as opposed to the having their decisions based primarily upon public safety." He also details of public meetings with PG&E with regard to resources to be provided to customers in the event of shut-off, which show further evidence that PG&E is unconcerned with identifying or mitigating customer issues created by de-energization. 42

Public Advocates

CalPA asserts that: "The Commission should not use a prescriptive technique to determine when de-energization should occur because wildfire conditions are dynamic and not every situation is the same. Developing rigid thresholds could impair utilities' flexibility to respond to changing conditions in their service territories."

³⁸ PG&E data request response WildfireMitigationPlans DR MGRA 003-O01.

³⁹ PG&E data request response WildfireMitigationPlans DR MGRA 003-Q02.

⁴⁰ MGRA Proposal; p. 4.

⁴¹ R.18-12-005; OPENING COMMENTS OF WILLIAM B. ABRAMS ON PHASE 2 TRACK 1 DE-ENERGIZATION PROCEEDING; p. 9. (Abrams Comments)

⁴² Id.; p. 14.

⁴³ CalPA Proposal; p. 3.

As residents of a high fire threat area, MGRA is and has been sensitive to the fact that utilities need to have the flexibility to ensure public safety during extreme fire weather conditions. As we've mentioned in earlier in this proceeding, MGRA was the only intervenor on the original shut-off proceeding, A.08-12-021, to agree with SDG&E that utilities needed to have flexibility under extreme weather conditions that "threaten to topple power lines onto tinder dry brush", 44 an exception that became operative for all utilities under ESRB-8. However, that does not mean that utilities can or should have unbridled discretion to determine how or when PSPS will be used. Indeed, the very different approaches taken so far this year by PG&E and SCE as evidenced in their post-event filings and during the week of October 7th raise concerns that PSPS may become a standard operating procedure rather than an emergency measure to be put in place during extraordinary events.

The question raised in the Scoping Memo is in regard to "standardized risk criteria", and not "rigid thresholds", and it is an important distinction. Standardized risk criteria ensure help to ensure that all California residents are afforded equal access to safe and reliable power by preventing utilities from setting self-serving or capricious internal criteria. However, banning a utility from invoking PSPS unless rigid criteria are met could be dangerous if those criteria don't capture all hazards posed to and from the utility's infrastructure. For this reason, some level of utility discretion should be permitted, but as specified in D.12-04-024 exceptions to the standardized risk criteria would be subject to Commission review. Utilities will need to explain in their after-action reports why they decided to invoke PSPS under conditions that did not meet the standardized risk criteria, and allow SED to make the determination of whether an exception would be reasonable or not. In the case that the utility found risk from shortcomings in utility infrastructure or vegetation management, the Commission might require a remedial plan to address the affected area so as to reduce the potential need for future de-energization. If the utility does not adequately defend its use of PSPS, or if there is evidence that the utility is basing its decision on liability avoidance, then the Commission might issue a warning and specify what future actions might merit penalties. Utilities not meeting reasonableness criteria may also be liable for damages accruing from shutoff, though ESRB-8 is vague regarding this point.⁴⁵ The Commission should reinforce the determination made in D.12-04-024 that meeting a reasonableness standard is a prerequisite for any exemption from liability.

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⁴⁴ D.09-09-030; pp. 61-62.

⁴⁵ ESRB-8; pp. 4, 5.

CalPA is also concerned that: "Defining at what thresholds a utility can de-energize lines may have the adverse effect of incentivizing de-energization each time conditions reach that level, even if other factors may lessen the severity of the conditions." This is more of a concern if strict thresholds are adopted rather than standardized risk criteria. If the Commission adopts legally binding thresholds, then it is likely that they would need to be lax in order to enable utilities to meet all contingencies. In such a case, CalPA's concern might have merit. However, if the "standardized risk criteria" are interpreted as a reasonableness threshold, they can be set at a more stringent level. There should a basic assumption that PSPS when standardized risk criteria are met is likely to be reasonable. If all standardized risk criteria are not met, PSPS may still be reasonable, but in this case the utility's burden of proof should be higher.

Finally, standardized risk criteria should be the outcome of cost/benefit and risk/benefit analysis, and these criteria may vary between utilities and across utility service areas. For instance, it might be determined that certain circuits in remote areas might be costly to bring up to the same engineering standard as other circuits affecting more customers, and that these would be given lower priority in the utility's hardening program. It would be reasonable in this case to have lower de-energization thresholds on circuits that had not yet been hardened. However, the process by which these thresholds are determined would be the same across the utility service area, and ideally from utility to utility. In this manner, customers and residents across the state can be assured a common standard of cost and safety.

As an added note, the PSPS event initiated by PG&E the week of October 7th makes clear the folly of allowing the utilities to have a free hand in setting de-energization thresholds and policy. From media reports and from social network posts it was clear that the PG&E shutoff event not only caused substantial economic disruption to PG&E customers but also put vulnerable individuals at risk. Due to the distributed nature of the harm done, it may not be possible to directly attribute the shutoff to injuries or medical crises caused or worsened by the shutoff, but the sheer statistics of the event dictate that harm must have occurred. The stance held by CalPA and the utilities – that utilities know their own business and should be trusted to develop the de-energization thresholds required to keep their customers safe – has been utterly compromised by PG&E's ham-

⁴⁶ CalPA Proposal; p. 4.

handed approach to de-energization over the past week. The Commission needs to retake control of the process and lead the establishment of standards.

2.4. Notification and Communication

MGRA has no comments at this time.

2.5. PSPS and Transmission Lines

MGRA has no comments at this time.

2.6. Lessons Learned

a. Based upon recent PSPS events since adoption of D.19-05-042, what changes or updates to the guidelines adopted in that decision and Resolution ESRB-8 should the Commission consider?

MGRA

In our proposal filing, MGRA analyzed PSPS events and warnings initiated by SCE and PG&E.⁴⁷ We noted that SCE has issued 6 de-energization reports, PG&E has issued 1 deenergization report, and SDG&E and the small IOUs have issued none. We noted our concern with the SCE practice of having a low threshold for initiating the shutoff process and sending out warnings, and this could have negative "boy who cried wolf" consequences if the practice of sending out false alarms is widespread. Furthermore, no details of the technical justifications for initiating the PSPS process and warnings were provided, and no obvious indications of extreme weather were found in MGRA's review of national forecasts during the PSPS warning periods.

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⁴⁷ Id.; pp. 7-11.

We re-iterated that is the Commission's duty to ensure that all California residents are provided with safe and reliable electricity, and it follows that uniform practices need to be enforced with regard to de-energization. In order to ensure common and safe practice and to reduce the harm and cost due to shutoff and shutoff warnings, MGRA recommends that utility PSPS reports should additionally provide:

- Weather predictions and or maps upon which the shutoff decision is based.
- Estimated maximum wind speeds for the circuit that is at warning for shutoff or involved in a PSPS event.
- Measured actual wind speeds for the circuit during the potential shutoff event window, whether or not the circuit is actually de-energized.
- For photographic evidence of damage, circuit number and nearest weather station data should be provided.

MGRA also recommends that SED and the Commission should closely evaluate the current SCE criteria as indicated in its post-event filings in order to determine whether they are consistent with the intent of ESRB-8 and D.19-05-042.

UCAN

UCAN's proposals describe recent research into microscale wind predictions that could potentially lead to the ability to pinpoint extreme wind behavior and tailor PSPS, hardening programs, and vegetation management to areas of the most extreme risk.⁴⁸ They suggest that the Camp fire ignition point may have been detected and flagged for PSPS by these new methods. These new methods and techniques should be explored in Track 2, since they have the potential to reduce wildfire risk in the areas experiencing the most extreme weather and reducing risks due to power shutoff by restricting PSPS to specific areas. The method's proposed by UCAN's expert are different than those currently used by utility meteorology departments⁴⁹ and also used to develop

⁴⁸ R.18-12-005; PROPOSALS OF THE UTILITY CONSUMERS' ACTION NETWORK ON PHASE 2, TRACK 1 OF ORDER INSTITUTING RULEMAKING 18-12-005; September 17, 2019. (UCAN Proposal): "An issue for development is the consideration, as mentioned earlier, that microscale extrema, which newer scientific studies suggest account for an additional 20-30 mph in wind speed, is not produced in national forecasts (nor would these be produced by planned utility op center forecasts)."

⁴⁹ R.18-10-007; SOUTHERN CALIFORNIA EDISON COMPANY'S (U338-E) REPORT ON DATA

the statewide utility fire threat map.⁵⁰ If validated, these methods could prove to be extremely valuable to California residents and ratepayers, and therefore the Commission should incorporate an evaluation of the maturity and applicability of the proposed UCAN methodology within the scope of this proceeding. This proceeding can also ensure that adequate data is made available by the utilities (PG&E and SCE weather network data, new 30 second weather data from SDG&E⁵¹) that will enable the Commission and parties to adequately assess the PSPS actions taken by utilities, and to enable validation of alternative models.

Abrams

Abrams correctly states that: "Only outcome-based performance metrics will provide the level of accountability our communities need given the high-stakes these events impose on our businesses and our residents." MGRA agrees, and that is why we suggest that the Commission require that the utilities provide 1) predictive data and models used internally to justify shut-off 2) weather and FPI data to be compared against the prediction and 3) cost benefit analysis used to justify de-energization thresholds.

3. CONCLUSION

Party proposals and comments help to illustrate the complexity of the de-energization issue, and it is heartening to see the level of effort and thought that parties are putting forward to address the conflict that has been raised between 'safe' and 'reliable' electricity. While MGRA has not been involved in all issues pertinent to this track, we've identified some common themes in our own and party comments:

- At least one major IOU (PG&E), has significantly lowered its de-energization thresholds and is now applying de-energization on a massive scale.
- Economic, social and health impacts have been significant.

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COLLECTION FOR WILDFIRE MITIGATION PLANS REPORT; July 30, 2019; p. 9. R.18-10-007; SAN DIEGO GAS & ELECTRIC COMPANY'S (U 902 E) WILDFIRE MITIGATION PLAN; February 6, 2019; p. 49.

⁵⁰ R.15-05-006; Independent Review Team Final Report on the Production of the California Public Utility Commission's Statewide Fire Map 2; November 21, 2017; pp. 6-7.

⁵¹ R.18-10-007; SDG&E Wildfire Mitigation Plan Update; September 17, 2019; p. 18.

⁵² Id.; p. 15.

- Concerns about liability shedding are supported by this new behavior.
- Proof of "last resort" cannot be limited to execution of pro forma checklists but instead should be based on a full risk/benefit or cost/benefit analysis that justifies the shutoff threshold.
- In order for Californians to have an equal right to safe and reliable electric service, standards must be applied to utility shutoff practices. The events of the week of October 7th clearly demonstrate how different utility practices have disparate effects on customers with different service providers.
- While shutting off the power substantially reduces the potential for utility-sparked wildfire, it also imposes very substantial economic costs and safety risk on affected communities. Costs, benefits, and risks need to be quantitatively compared in order to determine appropriate de-energization thresholds.
- In general, shutting off at lower wind speeds provides less incremental increase in wildfire risk reduction and increases the outage duration, while general societal costs and most safety and health risks are unaffected by wind speed and scale with outage duration. Unless a utility demonstrates that it is making a substantial effort to take these considerations into account when it sets its shutoff threshold it is likely engaged in liability shedding, which the Commission should not permit.
- In their after-action PSPS reports, utilities should clearly show the technical predictions that led to their choice of circuits to de-energize, and they should compare these to data collected during the weather event itself to verify that the predictive models it is using are accurate.

Respectfully submitted this 15th day of October, 2019,

By: <u>/S/</u> **Diane Conklin**

Diane Conklin
Spokesperson
Mussey Grade Road Alliance
P.O. Box 683
Ramona, CA 92065
(760) 787 – 0794 T
dj0conklin@earthlink.net